

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A device for the extracorporeal treatment of blood comprising:

- [[-]] at least one exchanger comprising a semi-permeable membrane dividing said exchanger into a first chamber and a second chamber, at least one first inlet for blood to be treated being in fluid communication with the first chamber of the exchanger, a first fluid outlet being in fluid communication with the first chamber of the exchanger and a second fluid outlet being in fluid communication with the second chamber of the exchanger;[[,]]
- [[-]] an input line for blood to be treated connected to the first inlet of the exchanger;[[,]]
- [[-]] a blood output line connected to the first outlet of the exchanger;[[,]]
- [[-]] at least one treatment unit comprising a semi-permeable membrane dividing the treatment unit into a first chamber and a second chamber, the treatment unit having at least one first fluid inlet in fluid communication with the second chamber of the treatment unit and at least one first fluid outlet in fluid communication with the first chamber of the treatment unit;[[,]]

[[-]] the second outlet of the exchanger being in fluid communication with the first inlet of the treatment unit; [[,]] and

[[-]] the first outlet of the treatment unit being in fluid communication with the input line; [[,]]

wherein:

[[-]] the treatment unit includes a second fluid outlet in fluid communication with the second chamber of the treatment unit; and

[[-]] the second outlet of the treatment unit is in fluid communication with a first waste liquid discharge line.

2. (Currently Amended) A device according to claim 1, wherein a first duct is connected between the second outlet of the exchanger and the first inlet of the treatment unit.

3. (Currently Amended) A device according to claim 1, wherein a second duct is connected between the first outlet of the treatment unit and the first inlet of the exchanger.

4. (Currently Amended) A device according to claim 1, comprising a first waste liquid discharge line connecting the second outlet of the treatment unit to a first waste liquid container.

5. (Original) A device according to claim 1, wherein the molecular permeability of the membrane of the exchanger is greater than the molecular permeability of the membrane of the treatment unit, at least above a certain molecular weight.

6. (Original) A device according to claim 5, wherein the membrane of the exchanger is a high-flow membrane and the membrane of the treatment unit is a low-flow membrane.

7. (Currently Amended) A device according to claim 5, wherein ~~the~~ a ratio of ~~the~~ a cut-off value of the ~~first~~ membrane of the exchanger to ~~the~~ a ~~cut-off~~ cut-off value of the ~~second~~ membrane of the treatment unit is less than or equal to 3.

8. (Currently Amended) A device according to claim 5, wherein ~~the~~ a difference in ~~the~~ a cut-off value between the ~~first~~ membrane of the exchanger and the ~~second~~ membrane of the treatment unit lies between 20 000 dalton and 30 000 dalton.

9. (Currently Amended) A device according to claim 5, wherein ~~the~~ a cut-off value of the ~~first~~ membrane of the exchanger is less than or equal to 40 000 dalton.

10. (Currently Amended) A device according to claim 5, wherein ~~the~~ a cut-off value of the ~~second~~ membrane of the treatment unit is less than or equal to 10 000 dalton.

11. (Currently Amended) A device according to claim 1, ~~wherein~~ further comprising a post-dilution line having a first end is connected, ~~at one end,~~ to the output line and a second end is connected, ~~at its other end,~~ to a first source of sterile liquid.

12. (Currently Amended) A device according to claim 1 or 11, ~~wherein~~ further comprising a pre-dilution line having a first end is connected, ~~at one end,~~ to the input line and a second end connected, ~~at its other end,~~ to a second source of sterile liquid.

13. (Currently Amended) A device according to claim 12, wherein the pre-dilution line is connected directly to ~~said second~~ a duct connected between the first outlet of the treatment unit and the first inlet of the exchanger.

14. (Currently Amended) A device according to claim 12, wherein the pre-dilution line is connected directly to the input line.

15. (Currently Amended) A device according to claim 12 wherein, at least one source of sterile liquid is a bag of sterile liquid.

16. (Original) A device according to claim 1, wherein the exchanger is a plasma filter.

17. (Previously Presented) A device according to claim 16, wherein the plasma filter has a cut-off value between one million and five million dalton.

18. (Currently Amended) A device according to claim 16 or 17, wherein the treatment unit has a cut-off value less than or equal to 250 000 dalton.

19. (Currently Amended) A device according to claim 18 wherein, the treatment unit comprises a semi-permeable membrane having a ~~cut-off~~ cut-off value such that all albumin molecules pass through said membrane.

20. (Currently Amended) A device according to claim 2, further comprising a reactor active on the first duct.

21. (Currently Amended) A device according to claim 2, further comprising an adsorption device active on the first duct.

22. (Currently Amended) A device according to claim 2, further comprising a radiation device active on the first duct.

23. (Currently Amended) A device according to claim 1, further comprising first means for regulating liquid flow rate placed on the input line connected to the first inlet of the exchanger.

24. (Currently Amended) A device according to claim 1, further comprising a first duct connecting the second outlet of the exchanger ~~an~~ and the first inlet of the treatment unit; ~~and comprising~~

first means for regulating liquid flow rate placed on the input line exactly between the first inlet of the exchanger and a connection point connecting the input line to the second duct.

25. (Currently Amended) A device according to claim 1, further comprising a first duct connecting the second outlet ~~5~~ of the exchanger ~~an~~ and the first inlet of the treatment unit;

a second duct connecting the first outlet of the treatment unit and the first inlet of the exchanger;

~~first~~ means for regulating liquid flow rate placed on the input line upstream of the connection point connecting the input line to the second duct; and

~~second~~ means for regulating liquid flow rate placed on the second duct.

26. (Currently Amended) A device according to claim 1, further comprising a first duct connecting the second outlet of the exchanger ~~an~~ and the first inlet of the treatment unit; and

~~third~~ means for regulating liquid flow rate placed on the first duct connecting the second outlet of the exchanger to the first inlet of the treatment unit.

27. (Currently Amended) A device according to claim 1, further comprising a post-dilution line having a first end connected, ~~at one end,~~ to the output line, and, ~~at its other~~ a second end connected, to a first source of sterile liquid; and comprising

~~fourth~~ means for regulating liquid flow rate placed on the post-dilution line.

28. (Currently Amended) A device according to claim 1, further comprising ~~fifth~~ means for regulating a liquid flow rate placed on the waste liquid discharge line and connecting the second outlet of the treatment unit to a drain.

29. (Currently Amended) A device according to claim 12, further comprising ~~sixth~~ means for regulating liquid flow rate placed on the pre-dilution line.

30. (Currently Amended) A device according to claim 1, further comprising a bag containing a first source of sterile liquid for post-dilution, and ~~wherein~~ the a first waste liquid container connected to the discharge line from the treatment unit is being a bag for receiving waste liquid.

31. (Currently Amended) A device according to claim 30, further comprising a balance to weigh the bag of sterile liquid and the ~~bag~~ bag of waste liquid.

32. (Currently Amended) A device according to claim 31 wherein, said balance comprises a first independent balance to weigh the bag of sterile liquid and a second independent balance to weigh the bag of waste liquid.

33. (Currently Amended) A device according to claim 30, further comprising:

a post-dilution line connected, at one end, to the output line, and, at its other end, to a first source of sterile liquid;

~~fourth~~ means for regulating liquid flow rate placed on the post-dilution line;
a balance to weigh the bag of sterile liquid and the bag of waste liquid;
~~fifth~~ means for regulating liquid flow rate placed on the waste liquid discharge line
connecting the second outlet of the treatment unit to a drain; and
a calculation and control unit to receive weight signals emitted by the balance
and to control one or both of the ~~fourth~~ means for regulating liquid flow rate placed on
the post-dilution line and the ~~fifth~~ means for regulating liquid flow rate placed on the
waste liquid discharge line.

34. (Currently Amended) A device according to claim 33, wherein said
balance comprises a first independent balance to weigh the bag of sterile liquid and a
second independent balance to weigh the bag of waste liquid, said calculation and
control unit receiving first and second weight signals emitted by the first and second
balances and independently controlling the ~~fourth~~ means for regulating liquid flow rate
placed on the post-dilution line and the ~~fifth~~ means for regulating liquid flow rate placed
on the waste liquid discharge line as a function of said first and second weight signals.

35. (Currently Amended) A method for the extracorporeal treatment of
blood to be implemented on a device for the extracorporeal treatment of blood
comprising:

[[-]] an exchanger comprising a semi-permeable membrane dividing
said exchanger into a first chamber and a second chamber, at least
one first inlet for blood to be treated in fluid communication with the
first chamber of the exchanger, a first fluid outlet in fluid
communication with the first chamber of the exchanger and a

- second fluid outlet in fluid communication with the second chamber of the exchanger;[[,]]
- [[-]] an blood input line for blood to be treated connected to the first inlet of the exchanger;[[,]]
- [[-]] a blood output line connected to the first outlet of the exchanger;[[,]]
and
- [[-]] a treatment unit comprising a semi-permeable membrane dividing said treatment unit into a first chamber to which at least one first fluid outlet is connected, and comprising a second chamber to which at least one first fluid inlet and a second fluid outlet are connected;[[,]]

the method comprising the following steps:

- [[-]] sending blood through the input line connected to the exchanger;[[,]]
- [[-]] filtering blood first in the exchanger, producing a first filtrate;[[,]]
- [[-]] filtering the first filtrate at least a second time in the treatment unit, producing a second filtrate;[[,]]
- [[-]] sending the second filtrate through the input line to effect a pre-dilution of the blood to be treated;[[,]]
- [[-]] sending the blood out from the exchanger to the output line;[[,]] and
- [[-]] sending ~~the~~ a non-filtered liquid from the second chamber of the treatment unit to the a waste drain line, said waste drain line being connected to the second fluid outlet of the treatment unit.

36. (Currently Amended) A method ~~Method~~ according to claim 35,
wherein the second filtration step filters through the membrane of the treatment unit
molecules of molecular weight less than the molecular weight of the molecules filtered
by the membrane ~~16~~ of the exchanger during the first filtration step.